ZIMBABWE

STANDARDS-BASED MANAGEMENT AND RECOGNITION FOR MATERNAL AND NEWBORN CARE

Findings from a Baseline Assessment in Mutare and Chimanimani Districts

February 2012

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS iv
ABOUT MCHIP/ZIMBABWE iv
ACRONYMS v
EXECUTIVE SUMMARY i
1. INTRODUCTION 2
2. ASSESSMENT DESIGN 3
3. ASSESSMENT FINDINGS 8
4. ANTENATAL CARE SERVICES 9
5. LABOR AND DELIVERY SERVICES 11
6. MANAGING NEWBORN COMPLICATIONS 15
7. MANAGING OBSTETRIC COMPLICATIONS 15
8. POSTNATAL CARE 15
9. CLINICAL SUPPORT SERVICES AND RESOURCES 16
10. MAIN CONCLUSIONS 19
Appendix A. MNH SBM-R Assessment Tools 20

List of Figures

Figure 1: Summary description of the SBM-R modules 5
Figure 2: Geographical location of sites for the baseline assessment 6
Figure 3: % of MNH standards fully met per facility (n=106 standards) 9
Figure 4: % of facilities fully satisfying standards for ANC client assessment (n=16) 9
Figure 5: % of facilities fully satisfying standards for counseling in ANC (n=16) 11
Figure 6: % of facilities fully meeting standards for initial general assessment in labor (n=16) 11
Figure 7: % of facilities fully meeting standards for screening for PE/E during labor and delivery (n=16) 13
Figure 8: % of facilities fully meeting standards for essential newborn care and resuscitation (n=16) 14
Figure 9: % of facilities fully meeting standards for managing newborn complications (n=16) 15
Figure 10: % of facilities fully meeting standards for postnatal care (n=16) 15
Figure 11: % of facilities fully satisfying standards for general infrastructure (n=16) 16
Figure 12: % of facilities fully satisfying standards for human resources (n=16) 17
Figure 13: % of facilities fully meeting standards for managing MNH services (n=16) 17
Figure 14: % of facilities fully satisfying standards for medical supplies (n=16) 18
Figure 15: % of facilities fully satisfying standards for health education (n=16) 18

List of Tables

Table 1: Selected sites 7
Table 2: % of facilities fully satisfying standards for screening for pre-eclampsia (n=16) 10
Table 3: % of facilities fully satisfying standards for ANC preventive treatments (n=16) 10

Table 4: % of facilities fully meeting standards for interpersonal communication during labor and delivery (n=16) 12
Table 5: % of facilities fully meeting standards for infection prevention during labor and delivery (n=16) 12
Table 6: % of facilities fully meeting standards for AMTSL (n=16) 14

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ABOUT MCHIP/ZIMBABWE

MCHIP's goal in Zimbabwe is to contribute to improved maternal, newborn and child health (MNCH) outcomes by helping to rebuild the capacity of Zimbabwe's public health system to deliver high-impact MNCH/family planning (FP) interventions. MCHIP/Zimbabwe's focus is on improving the population's access to and the quality of the continuum of MNCH/FP care that is provided by district hospitals (DH), rural health centers (RHC), and Village Health Workers (VHW) at the community level. This baseline assessment is one of the key steps in realizing this goal.

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AMTSL	Active Management of Third Stage of Labor
ANC	Antenatal Care
BP	Blood pressure
DH	District Hospital
DHE	District Health Executive
ENC	Essential Newborn Care
ENCR	Essential Newborn Care and Resuscitation
FANC	Focused Antenatal care
FP	Family Planning
HBB	Helping Babies breath
HE	Health Education
HIV	Human Immunodeficiency Virus
HQ	Head Quarter
HR	Human Resource
IEC	Information, Education and Communication
Imi	Intra-muscular injection
IMNCI	Integrated Management of Neonatal and Childhood Illnesses
IP	Infection prevention
IRC	International Rescue Committee
IU	International Units
L&D	labor and Delivery
LATH	Liverpool Associates in Tropical Health
LBW	Low Birth Weight
MCHIP	Maternal and Child Health Integrated Program
MNCH	Maternal, Newborn and Child Health
MNH	Maternal and newborn Health
MOHCW	Ministry of Health and Child Welfare
PE/E	Pre-eclampsia/Eclampsia
PEP	Post Exposure Prophylaxis
PMTCT	Prevention of Mother to Child Transmission (of HIV)
PNC	Postnatal Care
PPFP	Postpartum Family Planning
PPH	Postpartum Hemorrhage
QoC	Quality of Care
RHC	Rural health Centre
SBM-R	Standards Based Management and Recognition
Stds	Standards
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VHW	Village Health Worker
WHO	World Health Organization
ZNFPC	Zimbabwe National Family Planning Council

EXECUTIVE SUMMARY

Zimbabwe's maternal mortality ratio and neonatal mortality rate have worsened over the past 20 years. The country faces a real challenge in meeting the targets for Millennium Development Goals 4 and 5. What is killing women and children is known. Interventions that are effective for reducing these mortalities are known and in most cases are also affordable. One such key intervention is ensuring access to skilled attendance at delivery and in the early neonatal period. In Zimbabwe, skilled attendance at delivery has reached nearly 70%, yet mortality rates have continued to rise.

It is against this background that the Maternal and Child Health Integrated Program (MCHIP), under the leadership of the Ministry of Health and Child Welfare (MOHCW), and working through the Maternal and Newborn Health (MNH) working group, decided to introduce a quality improvement approach that goes 'beyond the numbers' in analyzing the coverage and quality of maternal and newborn care. This quality improvement approach, the Standards Based Management and Recognition (SBM-R) approach, is aimed at assessing the quality of care provided to women and newborns. This MNH SBM-R baseline assessment used clinical observations to generate valuable data on what actually happens during client-provider contacts. Such findings are invaluable in developing evidence-based quality improvement interventions.

This MNH baseline assessment, carried out in Mutare and Chimanimani districts of Manicaland province in late 2010, covers the horizontal continuum of care from antenatal care (ANC) to labor and delivery and post natal care (PNC). It also assessed the health system pillars for MNH. The findings highlight gaps and opportunities in improving quality of care for mothers and newborns at the health facility level.

Less than 40% of the MNH standards assessed were fully met at any facility participating in the assessment. Main challenges were in the clinical performance areas. For the health system pillars, the physical infrastructure was mainly intact, though with early signs of delayed maintenance and refurbishment setting in. All facilities had at least one qualified nurse. The main MNH medicines and supplies were available and being managed properly. The main gaps were noted in nearly all of the clinical areas and across all categories of clinical staff. In a majority of cases, health workers failed to satisfy standards for clinical skills, knowledge, and competencies required for effective delivery of quality MNH services. The gaps are in both the provision of essential MNH care as well as in emergency obstetric and neonatal care.

Key recommendations from the MNH baseline assessment include: the MNH commodities supply chain needs continued support; in-service clinical trainings need to increase emphasis on essential obstetric and essential newborn care; more effective and innovative strategies are needed to scale up in-service clinical trainings; quality improvement approaches need to be institutionalized in facilities; routine and scheduled maintenance of facilities needs increased support; and a few carefully selected indicators to monitor quality of MNH care need to be selected and integrated into the routine health management information system (HMIS).

1. INTRODUCTION

High coverage of institutional deliveries and skilled attendance at delivery are known effective interventions for reducing maternal and neonatal mortality. In Zimbabwe, coverage for both institutional delivery and skilled attendance at delivery have remained high over the past decade, yet over the same period the maternal mortality ratio has more than doubled from 283 in 1994 to 725 per 100,000 live births in 2007, and the neonatal mortality rate has stagnated at 24/1000 births. Information on what happens during institutional deliveries and the type of care being provided by skilled attendants is not readily available. Improving quality of obstetric care in facilities has recently been identified as a neglected and essential issue to reducing maternal deaths.[1] Interventions to improve quality of care in Zimbabwe however have been based on insufficient evidence.

MCHIP/Zimbabwe has identified improving the quality of maternal and newborn care as a priority and the over-arching strategy for contributing to progress towards Millennium Development Goals 4, 5, and 6. In Zimbabwe the main causes of maternal mortality are hemorrhage (14%), eclampsia (13%), and sepsis (8%), while neonatal deaths are mainly due to complications of prematurity/low birth weight (39%), birth asphyxia (27%), and sepsis (14%).[2] Effective interventions for screening, prevention, and treatment of obstetric and newborn complications exist that can be readily provided in facilities by skilled providers. Improving the quality of facility-based care to prevent and treat frequent maternal and newborn complications is important to reduce maternal and newborn deaths. The operational strategy for MCHIP/Zimbabwe support is based on a Standards Based Management and Recognition (SBM-R) quality improvement approach. The SBM-R strategy has been successfully implemented in several other countries, leading to significant improvements in health outcomes. The SBM-R framework is a four-step, cyclical operational model for improving quality through: (1) setting performance standards, (2) implementing the standards, (3) measuring progress, and (4) recognizing and rewarding achievement of the performance standards. This baseline assessment is the first operational step within the SBM-R framework to implement maternal and newborn health quality improvement activities.

The overall goal of this baseline assessment was to generate initial data to guide the need for and content of quality of care (QoC) improvement activities for maternal and newborn care at facility, district, provincial and national levels through documentation of the appropriate use, quality of implementation, and barriers to performance of key preventive, screening, and treatment interventions during facility-based maternal and newborn care. The definition of "quality" as applied to the practices we are assessing is that practices are correctly carried out per globally accepted, evidence-based guidelines. The ultimate aim is to contribute to reduction of frequent, preventable maternal and newborn deaths through increased use and quality of known life-saving interventions.

The primary objective of this assessment was to determine the quality of interventions that address frequent direct causes of maternal and newborn deaths in Mutare and Chimanimani districts. Specifically, for maternal health the direct causes assessed were pre-eclampsia/eclampsia (PE/E), post-partum hemorrhage, prolonged/obstructed labor, and sepsis. Among newborns, the assessment covered birth asphyxia, neonatal sepsis, and prematurity/low birth weight. The obstetric and neonatal care interventions assessed included screening, management of PE/E, use of active management of third stage of labor (AMTSL), partograph use, treatment of post-partum hemorrhage (PPH), infection prevention (IP), and essential newborn care and

[1] van den Broek NR and Graham WJ. Quality of care for maternal and newborn health: the neglected agenda. BJOG. 2009 Oct;116 Suppl 1:18-21.

[2] Stanton C, Blanc AK, Croft T, Choi Y. Skilled care in the developing world: progress to date and strategies for expanding coverage. J Biosoc Sci. 2007;39:109–20. doi: 10.1017/S0021932006001271

resuscitation (ENCR). The results of this assessment will be used to guide facility-specific quality improvement initiatives as well as contribute to national program and policy response for quality improvement of maternal and newborn care.

2. ASSESSMENT DESIGN

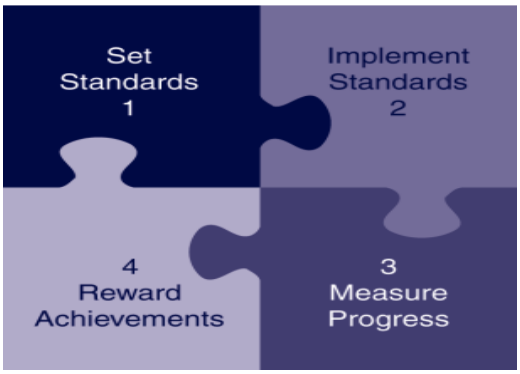
2.1. The Assessment Framework

The assessment was based on the Standards Based Management and Recognition (SBM-R) framework. The SBM-R framework is a quality improvement management approach which covers setting quality standards, measuring quality gaps, implementing quality improvement interventions, and rewarding attainment of quality improvement targets.

Basically, SBM-R is a practical approach that follows the following four steps:

1. Setting performance standards based on national norms and international references;
2. Implementing standards through a systematic methodology;
3. Measuring progress to guide improvement toward standards; and
4. Recognizing achievement of the standards.

Schematically, the following is a depiction of the SBM-R process and the interlinkages that exists between the steps.



2.2. Assessment Tools

A single tool was developed during a two-day MNH stakeholders' workshop in Harare convened by MOHCW with technical support from MCHIP. Participants were drawn from various partners working on maternal and newborn health (MNH) including MOHCW HQ and MOHCW staff from Mutare and Chimanimani districts, MCHIP, UNICEF, UNFPA, WHO, USAID, LATH, Save the Children, and individual MNH practitioners. The content for the tool was developed based on international (WHO-approved) protocols for: screening for PE/E in antenatal care (ANC); management of PE/E and PPH in labor and delivery (L&D); other interventions in L&D (e.g., routine and correct use of partograph, routine and correct use of AMTSL); infection prevention behaviors; postnatal care (PNC); provider-client interaction/communication; correct essential newborn care and newborn resuscitation. The format for the tools was adapted from the SBM-R tools used in other countries, with necessary changes being made to reflect the reality of the local context and practices.

The workshop outcome was a single tool with 10 modules comprised of clinical (core) and non-clinical areas. The clinical areas covered were ANC, L&D, Managing Maternal and Newborn Complications, and Postnatal Care. Non-clinical areas covered support services needed to provide clinical care, including: human and material resources; laboratory and pharmacy; and management systems at the facility level.

The tool was then pre-tested by a team from MOHCW, MCHIP/Zimbabwe, and Save the Children at Makumbe hospital in Mashonaland East. After the pre-test, the tool was revised and finalized.

Here we present the definition of terms used in the SBM-R tool as well as an extract of the tool to illustrate how the elements of the tool were fitted together. In the SBM-R assessment tools terminology, the following terms are defined thusly:

"Area": refers to a clinical or non-clinical service or a broad objective being assessed, for example ANC, or human resource management. The 10 areas represent the 10 modules described above.

"Performance Standard": refers to a key step, a specific objective, or a performance measure in the service delivery process of the area being assessed. For an area like labor, a standard could be on "managing the second stage of labor using partograph", or "active management of the third stage of labor", et cetera. The number of standards in an area depends on the number of evidence-based critical steps that need to be performed in order to fully provide or manage the given service.

"Verification Criteria": refers to a task that needs to be carried out in order to satisfy or meet a given standard. For example, a standard on screening for pre-eclampsia in ANC will have "taking blood pressure, examining for oedema, and checking for proteinuria" as three verification criteria for satisfactory performance of the standard.

"Score": refers to how data is entered onto the tool. The three scoring levels are "yes", "no", and "not applicable". A "yes" means the standard or the verification criterion being assessed has been FULLY satisfied. A "no" means the standard or the verification criterion being assessed has NOT been fully satisfied. "Not applicable" means the standard or verification criterion to be assessed is not applicable at that service delivery point (e.g., caesarian section at a rural health center), or that the issue has not been covered during the assessment. These scores were pre-coded '1', '0', and '2' for 'yes', 'no', and 'not applicable' respectively.

For example, in the area of "normal labor and delivery", one of the standards included observing whether the health provider in charge prepared the delivery room, equipment, and supplies necessary to conduct a clean and safe delivery. To verify that the standard was met, the verification criteria included observing that the room is clean, and every item of equipment and supplies is available and ready to use. The table extract below is an example of Standard #1 under the area of "labor and delivery".

Area 6: Normal labour and delivery	**Legal Values for the Scores**	**Facility name**	
		Score	**Comments**
Standard 1. The provider in charge prepares equipment, supplies and the environment to conduct clean and safe deliveries	**Yes = 1, No = 0 and N/A =2**		
Verification criterion 1: The provider ensures that the delivery room is clean.	**Yes = 1, No = 0 and N/A =2**		
VC 2: The provider ensures that the supplies and equipment to perform normal deliveries are available.	**Yes = 1, No = 0 and N/A =2**		
VC 3: The provider ensures that the supplies and equipment to manage the normal newborn including appropriate room temperature are available.	**Yes = 1, No = 0 and N/A =2**		

VC 4: The provider ensures that the supplies and equipment to manage any maternal or newborn complication are available.	**Yes = 1, No = 0 and N/A =2**		
VC 5: The provider ensures that the supplies and materials for infection prevention are available.	**Yes = 1, No = 0 and N/A =2**		

Figure 1 below summarizes the 10 modules that were developed, the content and scope of each module and the number of standards per each module.

Figure 1: Summary description of the SBM-R modules

Module #	Assessment Area	Content	# of Stds
1	Management of MNH Services	Focused on availability and accessibility of national policies and guidelines at the facility, status of quality improvement mechanisms in place, health information system, and mechanisms for assessing and getting client feedback.	10
2	MNH Human Resources	Focused on availability and management of MNH staff including performance appraisals and training.	07
3	Physical and Material Resources for MNH	Focused mainly on capacity of laboratory and pharmacy, including available tests and drug inventory.	14
4	Health Education	Infrastructure, plans, content and relevance of health education.	06
5	Antenatal Care	Antenatal assessment and management of a pregnant woman.	16
6	Normal Labor and Delivery and ENC	Managing a normal delivery.	20
7	PNC and Post-Partum Family Planning (PPFP)	Post natal assessment and management of the recently delivered woman and the newborn baby.	07
8	Emergency Obstetric Care	Diagnosis and management of main obstetric complications.	12
9	Emergency Neonatal Care	Diagnosis and management of main neonatal complications.	09
10	Infection Prevention	Assessed the general cleanliness of the facility, the stock status for infection prevention supplies, inventory and functional status of IP equipment and infrastructure, adherence to IP practices by facility staff including safe and proper disposal of medical waste.	07

2.3. Implementation of the Assessment

MCHIP, MOHCW HQ, and the District Health Executives (DHE) for Mutare and Chimanimani developed an implementation plan covering:

- Orientation of health facility staff and health executives on the SBM-R process;
- Training facility staff and health executives on baseline data collection using the 10 MNH SBM-R modules;
- Training facility staff and health executives on local utilization of MNH SBM-R baselines results; and
- Field work plan (including team composition, roles and responsibilities, facility schedules, and so on).

A two-day orientation and training workshop was held in Mutare for the two districts, with participants drawn from MOHCW HQ, MCHIP, Mutare and Chimanimani health executives and facility staff, and IRC. MCHIP provided two external SBM-R technical facilitators who, together with local MCHIP technical team members and MOHCW staff who had participated in the tool development workshop, facilitated the training. A summary report of workshop outputs and a full list of participants are available from MCHIP.

2.4. Assessment Methodology

The MNH SBM-R tool was administered in the following ways:

1. **Clinical practice observation:** Clinical observations were conducted at selected facilities using a set of concise, structured, clinical observation checklists for observation of ANC, health education, infection prevention, labor and delivery, essential newborn care and resuscitation, management of obstetric and neonatal complications, and postnatal care. If no case of L&D was available, clinical simulations were used to assess the level of preparedness (knowledge and clinical decision-making) for those health workers who normally provide L&D services on how to manage normal labor and delivery, as well as how to identify, manage, and treat common MNH complications.

2. **Facility inventory:** Reporting of infrastructure conditions and verification of availability and storage conditions of medications, supplies, and equipment. The inventory comprised of physical observation through a guided facility tour and structured interviews with different health workers for different sections of the tool to ensure the most accurate responses.

3. **Health care worker interviews:** Health care workers were interviewed to verify findings from the above processes and to also get information on the status of management systems and human resources.

2.5. Selection of Assessment Sites

The assessment target was to observe at least one delivery, one ANC consultation, and one PNC consultation at each facility during a 6-8 hour visit. Facilities covered during the assessment were selected on the basis of a predefined list of criteria agreed upon by MCHIP and MOHCW. The parameters to consider were:

- The likelihood of being able to observe at least one delivery during the 6-8 hour assessment period.
- The need to have a fair and reasonable geographical spread of selected facilities across the districts.
- The need for equitable representation of various levels of MNH facilities in the final selection.
- The need to limit the total number of facilities for the first phase SBM-R support to a manageable number.

In total 17 facilities were selected by the DHEs for assessment: 10 sites in Mutare and 7 sites in Chimanimani (see Figure 2 for map of selected districts), representing about a third of public facilities in each district and contributing over two-thirds of all district deliveries. The final selected sites are listed in Table 1 below.

Figure 2: Geographical location of sites for the baseline assessment

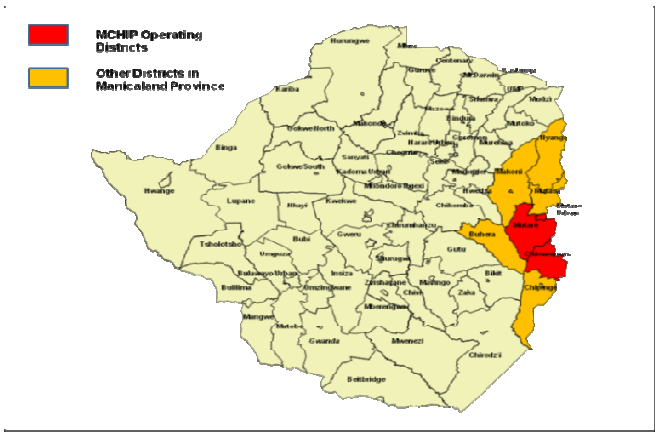


Table 1: Selected sites

MUTARE DISTRICT (n=10)	CHIMANIMANI DISTRICT (n=7)
Mutare Provincial Hospital	Mutambara Hospital
Sakubva Hospital	Chimanimani Rural Hospital
Marange Rural Hospital	Rusitu Rural Hospital
St Andrews Rural Hospital	Biriviri Rural Hospital
Odzi Rural Health Centre	Nyanyadzi Rural Hospital
Bazeley Bridge Rural Health Centre	Mutsvangwa Rural Health Centre
Gutaurare Rural health Centre	Chakohwa Rural Health Centre
Zimunya Rural Health Centre	
Dangamvura Polyclinic	
Sakubva Polyclinic	

In total, 10 facilities in Mutare and seven in Chimanimani were assessed. Note however that at the time of the assessment, Sakubva Hospital in Mutare was only providing postnatal care, so clinical observations could not be carried out there for ANC, labor, and delivery. Thus n=16 for some areas in the analyses below.

2.6. Data Collection

Data collection was done by facility staff themselves and was facilitated by a single team of 4-6 observers visiting a single facility per day. The observers were:

- Dr. Abdu Nurhussien, public health physician, with experience working for Jhpiego in Ethiopia on SBM-R
- Dr. Hillary Chiguvare, a public health physician, Technical Director for MCHIP/Zimbabwe
- Ms. Engeline Mawere, an experienced midwife, Clinical Training Advisor for MCHIP/Zimbabwe
- Ms. Elizabeth Dangaiso, an experienced Midwife, Newborn Health Technical Officer for MCHIP/Zimbabwe
- Mr. Mhlanga, experienced midwife, Community Sister, Mutare District, MOHCW
- Ms. Constance Mundoringisa, an experienced midwife, Provincial Coordinator for MCHIP/Zimbabwe
- Ms. Agnes Bingura, an experienced midwife, Community Sister, Chimanimani District, MOHCW

A majority of team members had completed in-service training in emergency obstetric and neonatal care within two years prior to the assessment. In addition, one staff member from each facility was trained on the SBM-R data collection process and helped coordinate the facility assessment at his/her facility.

Clinical observation skills for the team were standardized during the two-day training workshop and also during the pilot testing of the tools at Makumbe hospital in Goromonzi district, Mashonaland East. At each facility, data collection took at least six hours. Fieldwork was conducted from 18 November to 16 December 2010.

2.7. Data Management

Assessment data was recorded on SBM-R tools in duplicate by data collectors. At the end of data collection at each facility, external facilitators and all facility staff held debriefing meetings to discuss recurring themes in gaps identified and strengths observed during the assessment. A framework for initial action planning was

also discussed and facility staff members were tasked with preparing detailed action plans for quality improvement, starting with interventions that were easier, quicker, and cheaper to implement ('low hanging fruits'). Each facility retained one set of completed tools and external facilitators took the duplicate set for further analysis. Data from the duplicate copies was entered into both the SBM-R global database and into Excel by MCHIP. Data cleaning, analysis, and report writing was done by the MCHIP Technical Director. While acknowledging the differences in study design between this baseline assessment and the global MCHIP QoC study, to the extent possible we used a comparable analysis framework for this report.

2.8. Ethical Clearance

The MOHCW led the assessment team using the SBM-R tool as a management tool and not necessarily a study or a survey, thus no ethical approval was deemed necessary. However, all facilitators are registered professional practitioners and upheld high ethical standards throughout the assessment period and in the handling of data. Verbal consent was obtained from facility staff and clients to observe clinical consultations and to take photographs.

2.9. Limitations of the Assessment

The SBM-R baseline assessment is a management tool with more utility when administered by local facility staff themselves and data analyzed at that local level for identifying facility specific areas that need strengthening. There is need therefore to combine the small-scale and detailed analysis at the local level with a system-wide understanding of the trends of performance and quality improvement programs.

3. ASSESSMENT FINDINGS

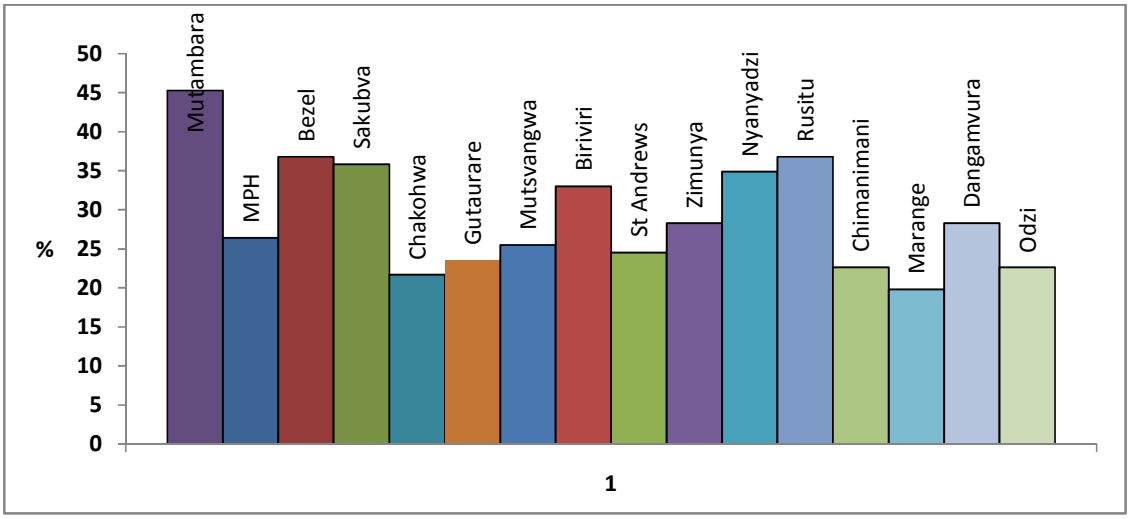
Assessment findings are presented in two main parts. The first part summarizes key findings from clinical observations of quality of care during ANC, labor, delivery, and postnatal care. In the second part, we present findings from assessing the general infrastructure and support services that influence the quality of clinical services provided at facilities. Both parts focus on recurring themes and seek to complement facility-specific analysis reports done by facility staff themselves.

In total, 10 facilities in Mutare and seven facilities in Chimanimani were assessed. Sakubva Hospital in Mutare only provides PNC, so clinical observations could not be carried out for ANC, labor, or delivery at that site. It was only possible to observe real cases of labor and delivery at four facilities, so at the remaining 12 facilities, simulations were conducted. This has a bearing on interpretation of findings for labor and delivery.

3.1. Overall Results

The total overall performance results (i.e., proportion of MNH standards fully met) for all facilities assessed ranged from 20% for Marange to 45% for Mutambara hospital. Figure 3 below shows the proportion of standards fully met by each facility during the assessment.

Figure 3: % of MNH standards fully met per facility (n=106 standards)



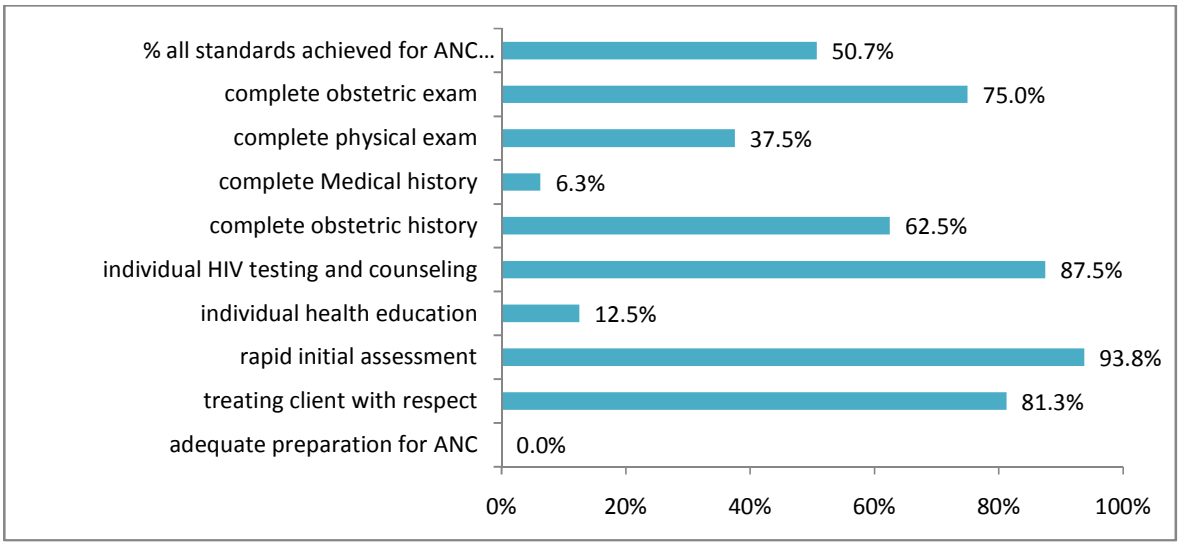
4. ANTENATAL CARE SERVICES

Assessment of ANC services covered four main areas corresponding to the WHO Focused Antenatal Care model, namely: ANC client assessment; screening for PE/E; giving preventive treatments; and provision of general health education.

4.1. ANC Client Assessment

All facilities except Sakubva Hospital were providing ANC. ANC client assessment involved observing how the provider prepared the consultation room for ANC, how the provider communicated with the client and her companion, and how the provider obtained clinical history and carried out the clinical examination. The main findings are summarized in Figure 4.

Figure 4: % of facilities fully satisfying standards for ANC client assessment (n=16)



Preparation of consultation room, supplies and equipment needed for a proper ANC consultation was below the set standard across all facilities (0% of facilities achieving this standard). Most providers adequately

carried out the initial client assessment thoroughly (93.8%) and in most cases treated pregnant women with respect (81.3%). The history taking and examination were not comprehensive enough in most cases, as it just focused on the obstetric aspects; in a minority of cases providers adequately took medical history (6.3%) and performed general physical examinations (37.5%). Some providers assumed that the client had received group health education and HIV testing and counseling, so during individual consultations these areas were rushed and in some cases failed to meet the set standards.

4.2. Screening for Pre-Eclampsia in ANC

Assessing screening for pre-eclampsia in ANC involved observing three main tasks: taking client blood pressure, testing urine for protein, and examining for oedema. Table 2 summarizes the main findings.

Table 2: % of facilities fully satisfying standards for screening for pre-eclampsia (n=16)

Components of screening	% facilities where standard met (n= 15)	# facilities meeting standard
Take client blood pressure	100	16
Perform or refer for urine test	47	7
Examine hands for oedema	100	16

All facilities were measuring clients' blood pressure and checking for oedema. The tool did not adequately assess the quality of blood pressure taking technique, especially in some facilities where the task was delegated to unqualified staff. Few facilities were performing or referring women for urine tests. In most cases, facilities did not have urine test kits. The mean facility score for screening for pre-eclampsia was 82%.

4.3. Preventive Treatments in ANC

Preventive treatments assessed were malaria, anaemia, and HIV. Main findings are summarized in Table 3.

Table 3: % of facilities fully satisfying standards for ANC preventive treatments (n=16)

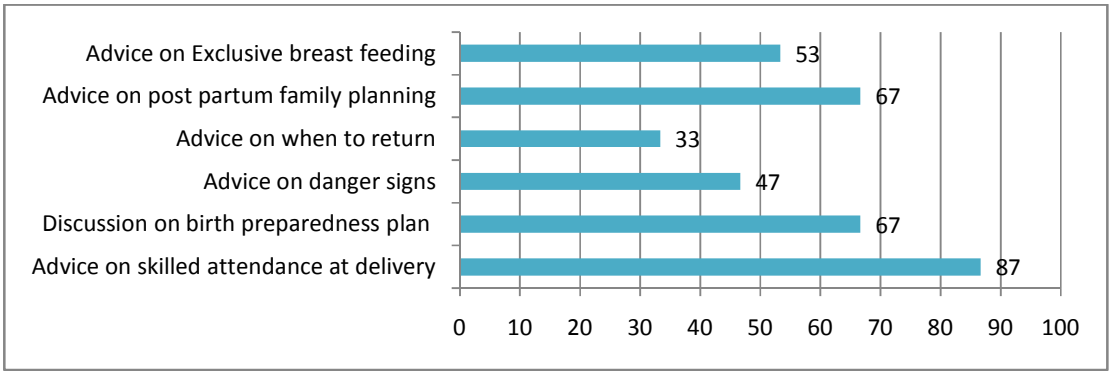
Intervention	%facilities where standard met (n=16)	# facilities where standard met
Preventing malaria in pregnancy	75	12
Preventing anaemia in pregnancy	100	16
Preventing HIV transmission	100	16

The mean facility score for preventive treatments in ANC was 91.6%, or in other words, on average, facilities met over 90% of the standard for preventive treatments in ANC. Some facilities had stock outs of recommended anti-malarial drugs and thus were not providing malaria prophylaxis as laid out in national guidelines.

4.4. Health Education and Counseling in ANC

This component assessed the scope and depth of discussions on breastfeeding, post-partum family planning (PPFP), birth preparedness, pregnancy danger signs, mobilizing for institutional delivery, and advice on when to return to the facility. The main findings are summarized in Figure 5.

Figure 5: % of facilities fully satisfying standards for counseling in ANC (n=16)



A majority of facilities (87%) emphasized the need for skilled attendance at delivery, though fewer proceeded to discuss a detailed birth preparedness plan with the client (67%). About half of providers observed gave advice on exclusive breast feeding (53%), 67% counseled on PPFP, and less than half (47%) were observed counseling clients on danger signs. In a majority of cases (67%), the client was either not given a return date or just given a vague date like return 'after 3 weeks'.

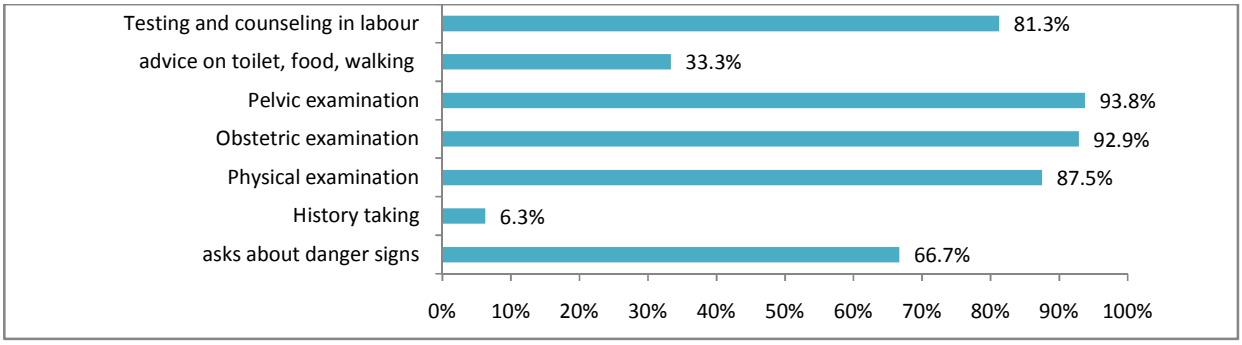
5. LABOR AND DELIVERY SERVICES

Deliveries were observed at Mutare Provincial Hospital (MPH), Mutambara Hospital, Dangamvura polyclinic, and at Sakubva polyclinic. All eight deliveries observed were normal vaginal deliveries. One baby was delivered and "did not cry" immediately but was successfully helped to breathe. All maternal outcomes were uneventful. The assessment covered initial general assessment in labor, specific interventions for detection and prevention of major causes of maternal deaths during labor and delivery, and cross cutting themes for providing woman-centered care like interpersonal communication as well as avoiding harmful/un-indicated practices. Results are presented below on the following major causes of maternal and newborn deaths during the peri-partum period: obstructed labor (use of partograph); puerperal and neonatal sepsis (infection prevention); PE/E (screening for PE/E); postpartum hemorrhage (AMTSL); birth asphyxia (Helping Babies Breathe, HBB); and promotion of client-centered care.

5.1. Labor and Delivery Clinical Skills

Assessment of labor and delivery skills covered preparing the consultation room for labor and delivery and observing the quality of clinical evaluation.

Figure 6: % of facilities fully meeting standards for initial general assessment in labor (n=16)



The overall score across all facilities for proportion of standards met in assessment of a client in labor was 33.3%. The pelvic examination, obstetric exam, and physical exams were reasonably thorough (standard met 93.8%, 92.9%, and 87.5% of the time observed). However, in the majority of cases, the evaluations just

focused on ascertaining the progress of labor with minimal regard to other important aspects of evaluating a woman in labor. Vital details like HIV status for women presenting in labor as well as some signs and symptoms of underlying medical or surgical conditions were unlikely to be elicited, especially considering the low standards met for patient history taking.

5.2. Client-Centered Care during Labor and Delivery

Assessing client-centered care covered interpersonal communication and some aspects of un-indicated practices. Table 4 summarizes the key findings from the assessment on client-centered care.

Table 4: % of facilities fully meeting standards for interpersonal communication during labor and delivery (n=16)

Client-centered care	% of facilities where standard met	# facilities where standard met
Uses appropriate language	18.8%	3
Greets the woman and her husband or companion in a cordial manner	31.3%	5
Introduces her/himself	12.5%	2
Explains care before any examination or procedures	50.0%	8
Encourages the woman to ask her husband or companion to remain at her side, as appropriate (if the setting allows)	53.3%	8
Responds to questions using easy-to-understand language	33.3%	5
Responds to client's immediate needs (thirst, hunger, cold/hot, need to urinate, etc.)	60.0%	9
Overall score for all tasks performed across all facilities	25.0%	4

In general, the quality of interpersonal communication during labor is poor. In most cases the woman is not treated with respect, is given a catalogue of 'do's and don'ts', her companion is not welcome, and scant information is given which in most cases is laden with sophisticated technical terms.

5.3. Infection Prevention in Labor and Delivery

The assessment of infection prevention practices covered the availability of equipment and supplies and adherence to infection prevention practices (IPP) during initial client assessment, delivery, and delivery of immediate newborn and postpartum care. Key findings are summarized in Table 5 below.

Table 5: % of facilities fully meeting standards for infection prevention during labor and delivery (n=16)

Infection prevention tasks for initial assessment	% of facilities where standards met	# facilities where standards met
Washes his/her hands before examination	100%	16
Infection prevention tasks during delivery		
Washes his/her hands before examination	87.5%	14
Wears HLD or sterile gloves for vaginal exam	93.8%	15
Puts on protective clothing	62.5%	10
Infection prevention tasks for immediate newborn and postpartum care		
Proper sharps disposal	56.3%	9
Proper decontamination of all usable instruments	37.5%	6
Proper disposal of all contaminated waste	56.3%	9
Proper disposal of placenta	87.5%	14

Washes his/her hands thoroughly	50.0%	8

In most cases, providers adhered to infection prevention practices just before starting to manage a woman in labor. As labor and delivery progressed however, fewer providers continued to systematically observe IPPs in-between tasks. Even though all facilities had sharp disposal boxes, the practices for proper disposal of sharps were observed by only half of facilities (56.3%). Similarly, even though nearly all facilities had proper infrastructure for disposal of medical waste and soiled linen, again the practices were below standard.

Except for use of protective clothing where the gap was supply related, for the other IPP aspects it was poor provider practice that was the major problem. For the polyclinics in Mutare, the final waste disposal is done off-site, which may pose a challenge for the facility team to have full control of that process.

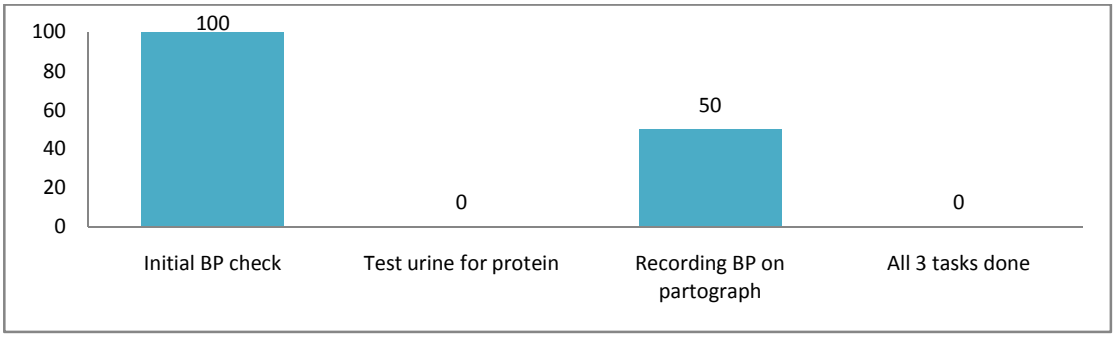
5.4. Harmful and Un-indicated Practices

The most common harmful practice was application of fundal pressure to expedite delivery. All facilities carried out the following un-indicated practices: instructing women to lie on their backs during labor and delivery; restricting movement and eating during labor; and not allowing companions in the labor wards.

5.5. Screening for Pre-eclampsia/Eclampsia in Labor and Delivery

Assessing screening for PE/E during labor and delivery covered three main tasks: taking blood pressure (BP); testing urine for protein; and recording the two findings on a partograph. The main findings are summarized in Figure 7 below.

Figure 7: % of facilities fully meeting standards for screening for PE/E during labor and delivery (n=16)



All providers were taking BP during labor but half did not record the BP on a partograph. The quality of the BP taken was not adequately assessed. No pregnant woman in labor had her urine tested for protein. In all, no facility performed ALL three tasks for screening for PE/E during labor.

5.6. Use of Partograph in Managing Second Stage of Labor

Use of the partograph in managing the second stage of labor was assessed by observing whether providers were using the partograph, the type of partograph being used, the completeness and timeliness of filling out the partograph, and the interpreting and use of partograph findings. The findings were that all facilities assessed were using the old WHO partograph for monitoring labor. In no cases observed was the partograph filled out on time or completely. Consequently, in no cases was it possible for providers to interpret the partograph and to take appropriate actions in real time.

5.7. Active Management of Third Stage of Labor

The assessment of AMTSL involved observing the three main tasks that must be done to prevent PPH: injecting oxytocin (uterotonic); abdominal palpation; and controlled cord traction. For each task, providers were assessed on correct timing, correct sequencing, and correct technique. The main findings are summarized in Table 6.

Table 6: % of facilities fully meeting standards for AMTSL (n=16)

AMTSL task	% of facilities where standard met
Abdominal palpation	50.0%
Oxytocin 10IU imi	57.1%
Proper controlled cord traction	66.7%
Overall AMTSL index for all facilities	**5.0 (out of 10)**

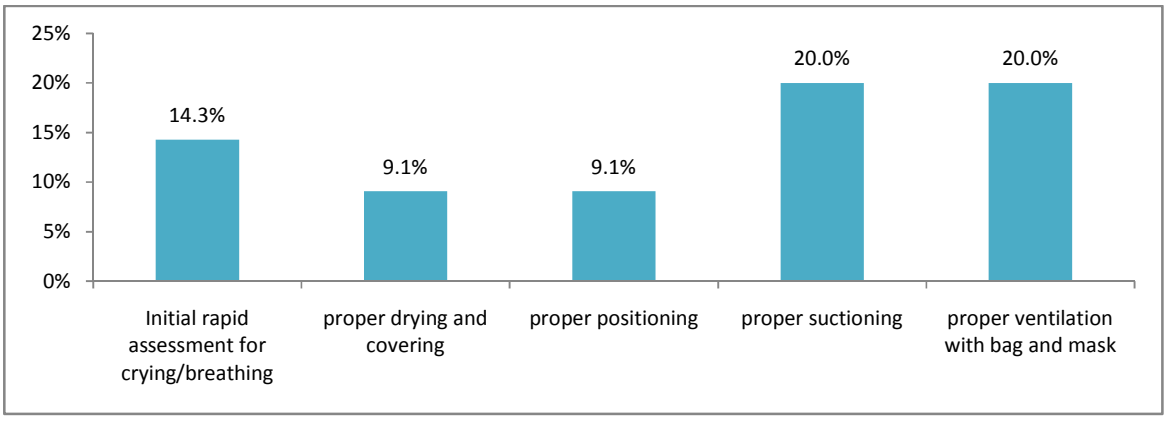
***NB**: AMTSL index was calculated as the % of facilities where standards for all three tasks were met, multiplied by 10.*

The overall AMTSL index for all facilities was 5 out of 10. This index, calculated as the % of facilities where standards for all three tasks were met, multiplied by 10, implies that the observed effective coverage for AMTSL in the sites was 50%. As for the specific tasks, all facilities were giving the correct dose of oxytocin but only 57.1% of the facilities were giving the oxytocin within the recommended time. Abdominal palpation was not routinely done (50% of the cases observed). All facilities were practicing controlled cord traction but in about one-third of the facilities (33%), though the task was performed, the verification criteria related to the technique were not fully satisfied.

5.8. Essential Newborn Care and Resuscitation

Assessment of the immediate postpartum care of the newborn was done using the Helping Babies Breath (HBB) framework. The HBB framework provides guidance on the correct timing, correct sequencing, and correct technique in carrying out the tasks under observation. The main findings are summarized in Figure 8.

Figure 8: % of facilities fully meeting standards for essential newborn care and resuscitation (n=16)



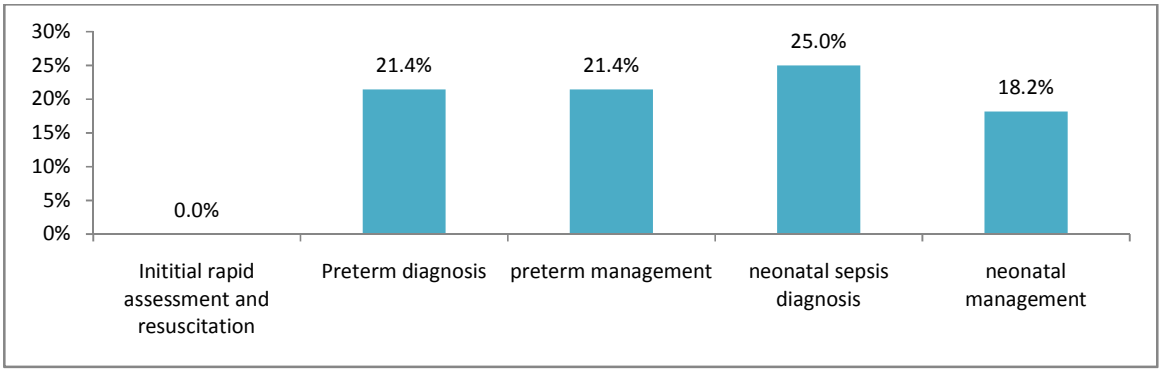
The overall score for standards related to skills, frequency, and proper sequencing in performing the HBB tasks was 9.1% for all facilities. Just about 10% of providers could properly do a rapid assessment of the

newborn, properly dry and cover the neonate. Where the baby needed help to breath, just 10% of providers could properly position the baby while a only a fifth could properly suction and ventillate with bag and mask.

6. MANAGING NEWBORN COMPLICATIONS

The clinical observations also assessed the extent to which providers were prepared to diagnose and manage leading newborn complications, namely birth asphyxia, neonatal sepsis, and low birth weight/pre-maturity. The main findings are summarized in Figure 9.

Figure 9: % of facilities fully meeting standards for managing newborn complications (n=16)



No facility fully met all the standards for managing newborn complications. Generally, a majority of the providers have competency gaps in managing newborns with complications. No facilities assessed could adequately manage an asphyxiated baby. Similarly, the majority of providers could not correctly diagnose and/or manage the other leading causes of neonatal mortality like preterm/LBW and neonatal sepsis.

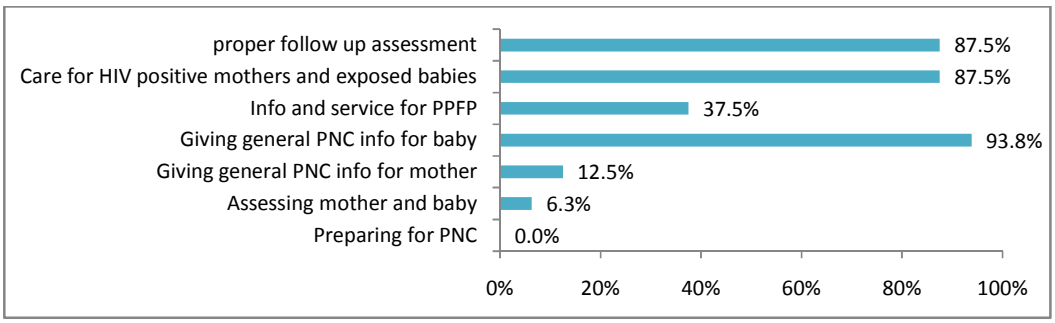
7. MANAGING OBSTETRIC COMPLICATIONS

No facility managed to fully satisfy all of the standards for managing obstetric complications. The identified gaps in provider knowledge and competencies were common among all types of providers and across all facilities.

8. POSTNATAL CARE

Clinical observations during PNC assessed four main areas normally covered during a PNC consultation, namely: proper assessment of the mother-baby pair; proper provision of general and specific information for promoting the health of the mother-baby pair; proper follow up care for issues and social issues identified during ANC, labor, and delivery; and managing specific current problems. Findings are summarized below.

Figure 10: % of facilities fully meeting standards for postnatal care (n=16)



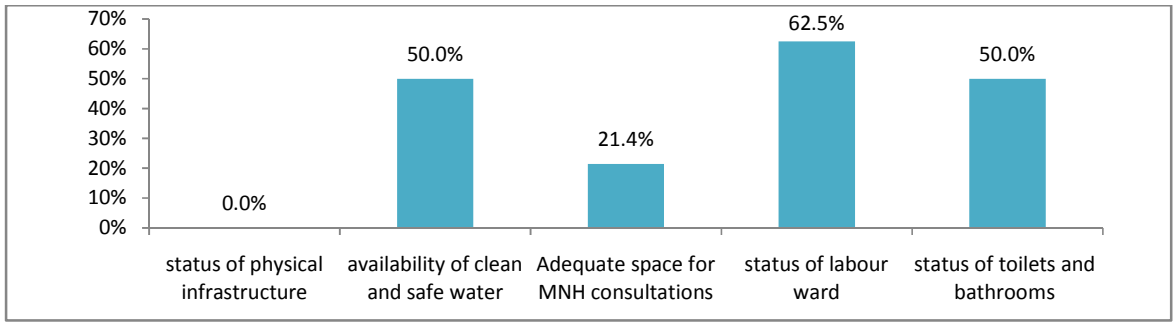
The PMTCT of HIV component was being done properly by majority of the facilities (87.5%). The preparation of the room, supplies, and equipment for PNC consulation however was poor across all facilities (0% meeting the standard). The mothers and newborns were rarely adequately assessed, except in exceptional cases where either of them was sick. Most facilities focused on giving general PNC information for the baby (93.8%), with very few facilities giving general PNC information for the mother (12.5%). All facilities discussed family planning but few facilities met the standards for PPFP (37.5%). The main gap was on the provider not being able to adequately counsel for PPFP and also not adequately emphasizing the benefits of lactational amenorrheria method and/or other long-acting methods of contraception. In general, beyond PMTCT of HIV and weighing, the PNC package provided was inadequate.

9. CLINICAL SUPPORT SERVICES AND RESOURCES

9.1. Status of General Infrastructure for MNH

The assessment explored in detail the state of the general physical infrastructure including ventilation and lighting as well as other areas that are needed to provide high quality MNH care. Other areas assessed were capacity and status of water source, status of rooms or areas designated for MNH consultations and admissions, and the general state of toilets and bathrooms for both clients and staff. Results are presented in Figure 11.

Figure 11: % of facilities fully satisfying standards for general infrastructure (n=16)

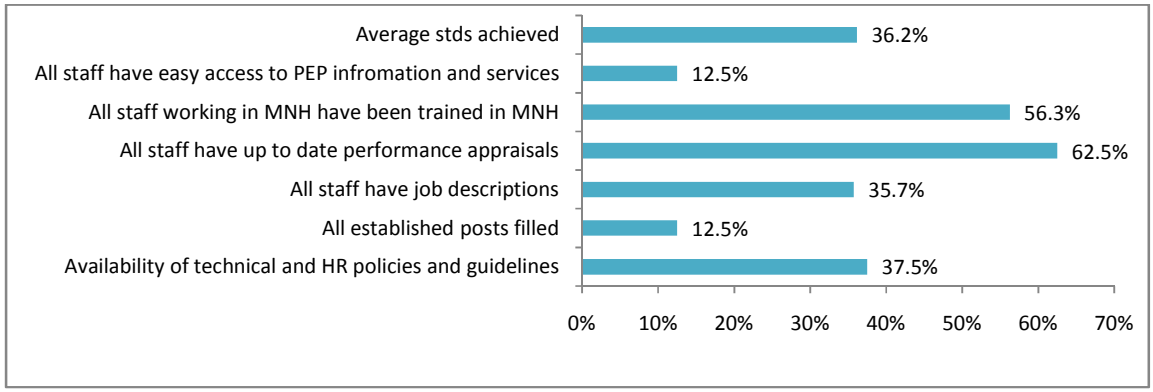


Generally all facilities failed to meet the standards for general infrastructure mainly due to inadequate space, while some facilities were in need of refurbishment. In half the facilities, the water source was either inadequate to meet the needs of the facility or the available water was not safe (50%). A majority of facilities had inadequate space for consultations (78.6%) leading to over-crowding and possibility of breaching privacy. Although all facilities had bathrooms of some sort, either they had no separate bathrooms for males and females, or had no separate bathrooms for staff and patients, or the bathrooms were in a poor state of repair. More details are in the facility-specific reports but here we have presented common trends across the facilities that were assessed.

9.2. Managing Human Resources for MNH

The human resource component of the assessment focused on ascertaining the availability of human resources (HR) and service delivery (technical) policies and strategies at the facility; reviewing records on facility staffing levels and adherence to HR management processes like staff performance appraisals; and implementing staff development and other activities to create a favorable work environment for staff. Findings are summarized in Figure 12.

Figure 12: % of facilities fully satisfying standards for human resources (n=16)

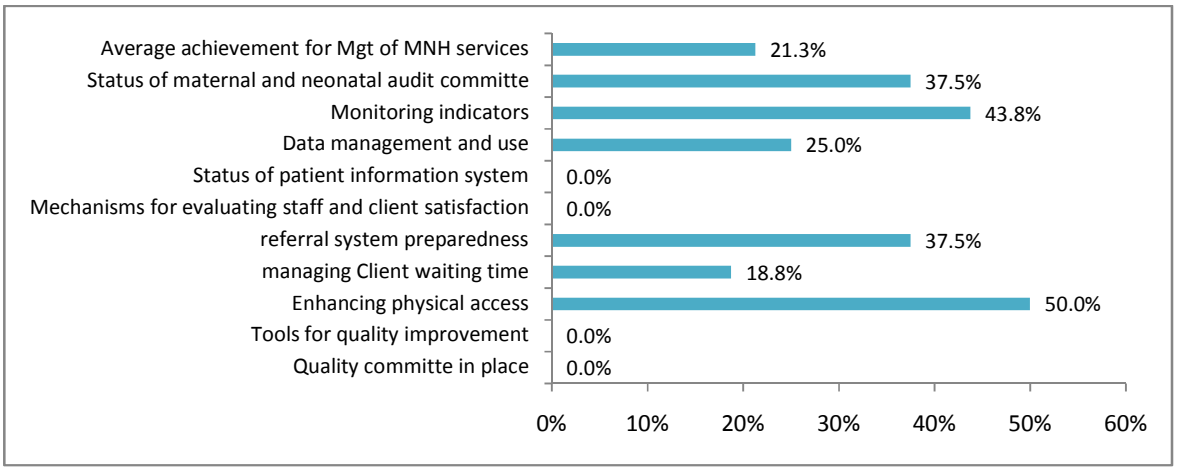


Few facilities had a full complement of the staff on their establishment in post. The situation mainly affects rural hospitals, polyclinics, and hospitals. Most rural health centres had the full complement of their staffing requirements in post. Few facilities (37.5%) had the necessary policies and guidelines that are supposed to inform their technical and administrative activities. Over half of the facilities (56.3%) had staff working in MNH having received training in MNH in the two years preceding the assessment. Performance appraisals (62.5%) and job descriptions (35.7%) were not up to date in most cases for some staff members. Very few facilities had staff with easy access to information and services on post-HIV exposure prophylaxis (PEP) (12.5%).

9.3. Managing Quality Improvement Activities

The assessment had standards to verify the status of available institutional mechanisms and systems to plan, implement, monitor, and evaluate quality of MNH care and services at the facility. Figure 13 summarizes the findings from assessing the various elements of quality improvement.

Figure 13: % of facilities fully meeting standards for managing MNH services (n=16)

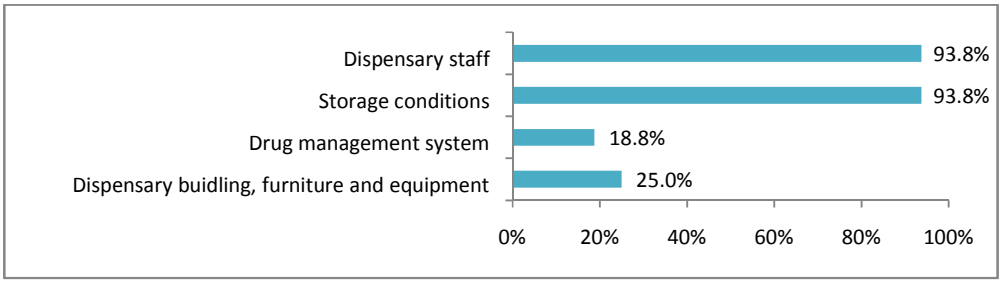


The structures and systems for planning, implementing, monitoring, and evaluating quality improvement initiatives are weak across all facilities. No functional quality improvement committees were in place and tracking quality of service delivery through suggestion boxes or mechanisms for monitoring client waiting times were weak.

9.4. Managing Medical Supplies for MNH

The assessment had standards on status of physical infrastructure as well as furniture and fittings for the pharmacy/dispensary; staffing situation in terms of numbers and training; compliance with stock management systems and procedures; and the availability of selected MNH drugs and supplies. Main findings related to medical supplies are presented in Figure 14.

Figure 14: % of facilities fully satisfying standards for medical supplies (n=16)

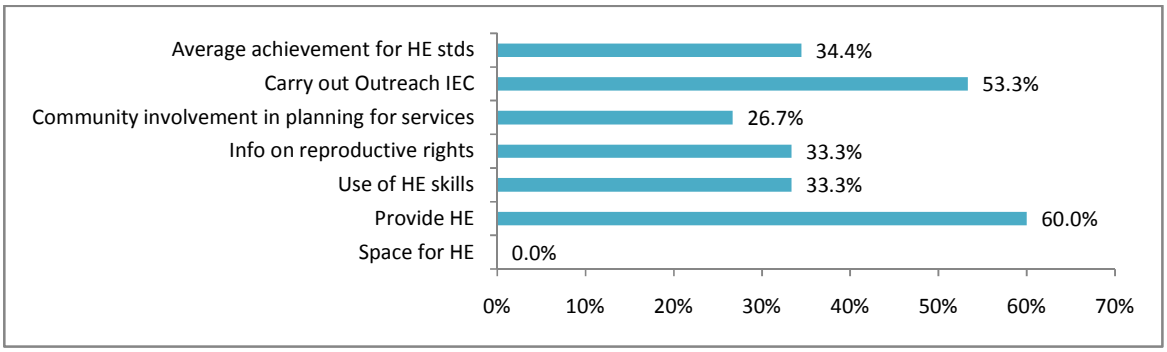


All facilities had all the selected MNH drugs and supplies, except magnesium sulphate and vitamin K. A majority of facilities had not been oriented on the magnesiun sulphate protocol for managing PE/E, so they were not ordering the drug. The supply of vitamin K was erratic. The storage space for the main drugs and supplies was adequate (93.8% meeting standard), with good ventilation and proper lighting. Furniture and fittings in most of the dispensaries was inadequate and in bad state of repair (25% meeting standard). Drug management systems were very weak with ordering, stock control, and record keeping not being done on time and consistently (18.8% of facilities meeting standard). A majority of the facilities had dispensaries manned by staff that had been trained to adequately support drug management. Supportive and supervisory follow up after training was erratic and not structured.

9.5. Health Education and Promotion

The assessment had standards designed to explore the status of space or room set aside for health education; the status of health education plans and session content; the use of teaching aids and other materials; and delivery model (static or outreach). The main findings are summarized in Figure 15.

Figure 15: % of facilities fully satisfying standards for health education (n=16)



Although a majority of facilities were holding well planned health education sessions (60%), none of them had proper space/area with the necessary furniture, fittings, and supplies for conducting the sessions. The quality of the sessions themselves was further compromised by the unavailability of teaching aids and

inadequate use of health education facilitation skills. Some facilities had scheduled visits for community outreach with targeted information, though the focus was generally limited to immunization and cholera.

10. MAIN CONCLUSIONS

Based on the results of this baseline assessment, the following conclusions can be made:

1. Institutionalize quality improvement approaches at facility level by supporting the establishment and revamping of the necessary structures and systems.
2. Staff performance management, as a key driver for quality improvement, needs to be more regular, continuous, and has to be completed for every cycle.
3. Routine and scheduled maintenance of infrastructure and equipment at facilities needs to be revived and adequately supported technically as well as financially.
4. Facility-level guidelines for provision of health education need to be standardized and support is also needed for procurement of visual aids and other health education materials.
5. Focused antenatal care needs to be introduced and scaled up in order to improve the quality of ANC services.
6. Clinical trainings are needed in management of both normal and complicated labor and delivery, as well as newborn care.
7. Re-positioning of infection prevention and control as a key component of MNH needs urgent and improved attention. Supporting development/review of standard policies and guidelines, procurement of equipment and supplies, and trainings in IP practices are key activities to focus on.
8. Support to laboratory and pharmacy, where gaps are currently minimal, needs to be continued.
9. Cross-fertilization of experiences between the more operationally mature PMTCT program and the relatively new but innovative SBM-R program needs to be promoted and to the extent possible, opportunities for integration of plans, service delivery guidelines, and monitoring and evaluation tools should be actively sought and utilized.
10. The process for developing and the output of the facility-led action plans should form the basis of any support to improving quality at the facility. Action points should be consolidated into plans for procurement, refurbishment, clinical training, and supportive supervision.

Appendix A. MNH SBM-R Assessment Tools

Module #	Assessment Area	Content
1	Management of MNH Services	Focused on availability and accessibility of national policies and guidelines at the facility, status of quality improvement mechanisms in place, health information system, and mechanisms for assessing and getting client feedback.
2	MNH Human Resources	Focused on availability and management of MNH staff including performance appraisals and training.
3	Physical and Material Resources for MNH	Focused mainly on capacity of laboratory and pharmacy, including available tests and drug inventory.
4	Health Education	Infrastructure, plans, content and relevance of health education.
5	Antenatal Care	Antenatal assessment and management of a pregnant woman.
6	Normal Labor and Delivery and ENC	Managing a normal delivery.
7	PNC and Post-Partum Family Planning (PPFP)	Post natal assessment and management of the recently delivered woman and the newborn baby.
8	Emergency Obstetric Care	Diagnosis and management of main obstetric complications.
9	Emergency Neonatal Care	Diagnosis and management of main neonatal complications.
10	Infection Prevention	Assessed the general cleanliness of the facility, the stock status for infection prevention supplies, inventory and functional status of IP equipment and infrastructure, adherence to IP practices by facility staff including safe and proper disposal of medical waste.

These tools can be obtained from MCHIP/Zimbabwe.

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